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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/856,584	05/23/2001	Jose Manuel Gallego	1-15397	3577

7590

10/08/2004

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EXAMINER

MEEKS, TIMOTHY HOWARD

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 10/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/856,584	Applicant(s) GALLEGO, JOSE MANUEL	
	Examiner Timothy H Meeks	Art Unit 1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,8-22 and 24-36 is/are rejected.
- 7) ☒ Claim(s) 4-7 and 23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Application Status

The amendment filed on 8/12/04 has been fully considered. Applicants have cancelled claims 2, 3, and 37. Claims 1 and 4-36 are pending.

Claim Objections

Claim 22 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 22 only requires that the underlayer comprise silicon oxide, however, claims 22 was amended to include this limitation.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 8-16, 20-22, 24-30, and 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guiselin et al. (5,965,246).

Guiselin discloses deposition of a stack of layers on a glass substrate to form a heat-treatable low-emissivity (less than 0.044, claim 1) coated glass that comprises depositing an aluminum oxyfluoride interlayer having a thickness of 45 and 60 nm, a reflecting silver layer deposited directly on the aluminum oxyfluoride layer having a thickness of 10 and 12 nm and a tin oxide dielectric layer on the silver layer having a thickness of 42 nm (col. 9, lines 40-60). Guiselin further discloses at col. 6, lines 10-25:

"It may be advantageous to combine the two types of techniques, and thus to deposit the interlayer, directly on the glass of a float-glass ribbon by pyrolysis when it is an oxide or oxyfluoride. Then, in a subsequent step, particularly when the functional layer is metal, more particularly silver, the other layers of the stack may be deposited on the glass by sputtering once the glass has been cut up. When an aluminum oxyfluoride interlayer is chosen, it may be deposited either by sputtering or by pyrolysis, preferably by pyrolysis in the vapor phase using an organometallic precursor, preferably one having alcoholate or beta.-diketone functionality of aluminum acetylacetonate or z-methyl-4,6-heptadione, on which compounds it is possible to substitute at least one of their hydrogen atoms by fluorine. It may thus be an aluminum trifluoroacetate or a hexafluoroacetylacetonate."

With respect to claim 16, Guiselin discloses at col. 4, lines 60-68 deposition of multiple silver and dielectric layers.

Guiselin explicitly exemplifies a stack of layers wherein aluminum oxyfluoride is used as the underlayer as opposed to silicon oxide. However, because Guiselin further discloses at col. 3, line 64 to col. 4, line 10 that either a low density oxygen deficient silicon oxide layer or aluminum oxyfluoride layer is suitable as the interlayer and at col. 6, lines 10-15 that both the oxide and oxyfluoride layers can be deposited by pyrolysis, it would have been obvious to have used silicon oxide as the underlayer deposited by pyrolysis with a reasonable expectation that such layer would be suitable as the interlayer in the stack of layers exemplified at col. 9. With respect to claim 34, the oxygen deficient silicon oxide interlayer is an "oxygen scavenging" layer. With respect to claims 35 and 36, please note that the disclosure of a laminated glazing at col. 5, line 54 to col. 6, line 5 inherently meets the limitation of an interlayer between the glazing panes as an adhesive layer is necessary to laminate the panes.

With respect to claims 8 and 9, Guiselin is silent as to the temperature for deposition of the tin oxide layer. If applicant can establish a showing of criticality in the claimed temperature, the rejection will be withdrawn. See *Exparte Khusid*, 174 USPQ 59 ("Where the principal difference between the claimed process and that taught by the reference is a temperature difference, it is incumbent upon applicant to establish criticality of that difference").

Claims 17-19 and 31-33 are rejected under 35 U.S.C. 103(a) as being Guiselin et al in view of Macquart et al.

Guiselin does not disclose heat treating the glass as claimed. However, because

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Macquart discloses at col. 1, lines 45-60 and col. 8, lines 40-65 that heat treating glass having coating layers similar to those of Guiselin at temperatures over 620 °C provides glass which is curved or functions as safety glass, it would have been obvious to have so treated the glass of Guiselin to provide these products.

Response to Arguments

Applicant's arguments filed 8/12/04 have been fully considered but they are not persuasive.

Applicants' amendment required removal of the rejection under 35 USC 102.

Applicants argue that Guiselin does not disclose or suggest the possibility of depositing the underlayer through a pyrolytic deposition process and directly depositing a reflective metal layer directly on the underlayer. However, the examiner maintains that such steps are explicitly disclosed by Guiselin as outlined in the rejection under 35 USC 102 set forth in the last office action, the underlayer being the aluminum oxyfluoride layer described at col. 9 and the deposition thereof by pyrolysis as described at col. 6 and the silver deposited directly thereon as described at col. 9, the silver being deposited by sputtering as described at col. 6.

Applicants argue that Guiselin requires all of the layers described therein for the intended functionality of the reference to be achieved. Guiselin at col. 9, line 40: "Likewise, the invention may be used in dielectric/silver/dielectric stacks which do not use layers having "wettability" of ZnO or Nb₂O₅ under the silver." Guiselin then clearly describes stacks of layers in "b)" and "c)" of the table at col. 9, stacks of layers wherein the interlayer aluminum oxyfluoride is deposited directly on the glass substrate and then the silver layer is deposited directly on the interlayer. This disclosure in view of the disclosed suitability of both silicon oxide and aluminum oxyfluoride interlayer and benefit of deposition thereof by pyrolysis renders the claimed invention obvious for the reasons established in the rejection above.

Applicants argue that claim 21 further distinguishes from Guiselin in now claiming that the silicon oxide layer is deposited directly on the glass. However, as established in the paragraph above, Guiselin clearly suggest provision of a silicon oxide interlayer directly on the glass substrate.

Applicants argue that Marquet does not address the deficiency of lack of a silicon oxide underlayer. The examiner maintains that Guiselin suggests this limitation for the reasons above.

Allowable Subject Matter

Claims 4-7 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy H Meeks whose telephone number is 571-272-1423. The examiner can normally be reached on Mon 6-6 and T-Th 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on 571-272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Timothy H Meeks
Primary Examiner
Art Unit 1762